



# Business Case for Partnering

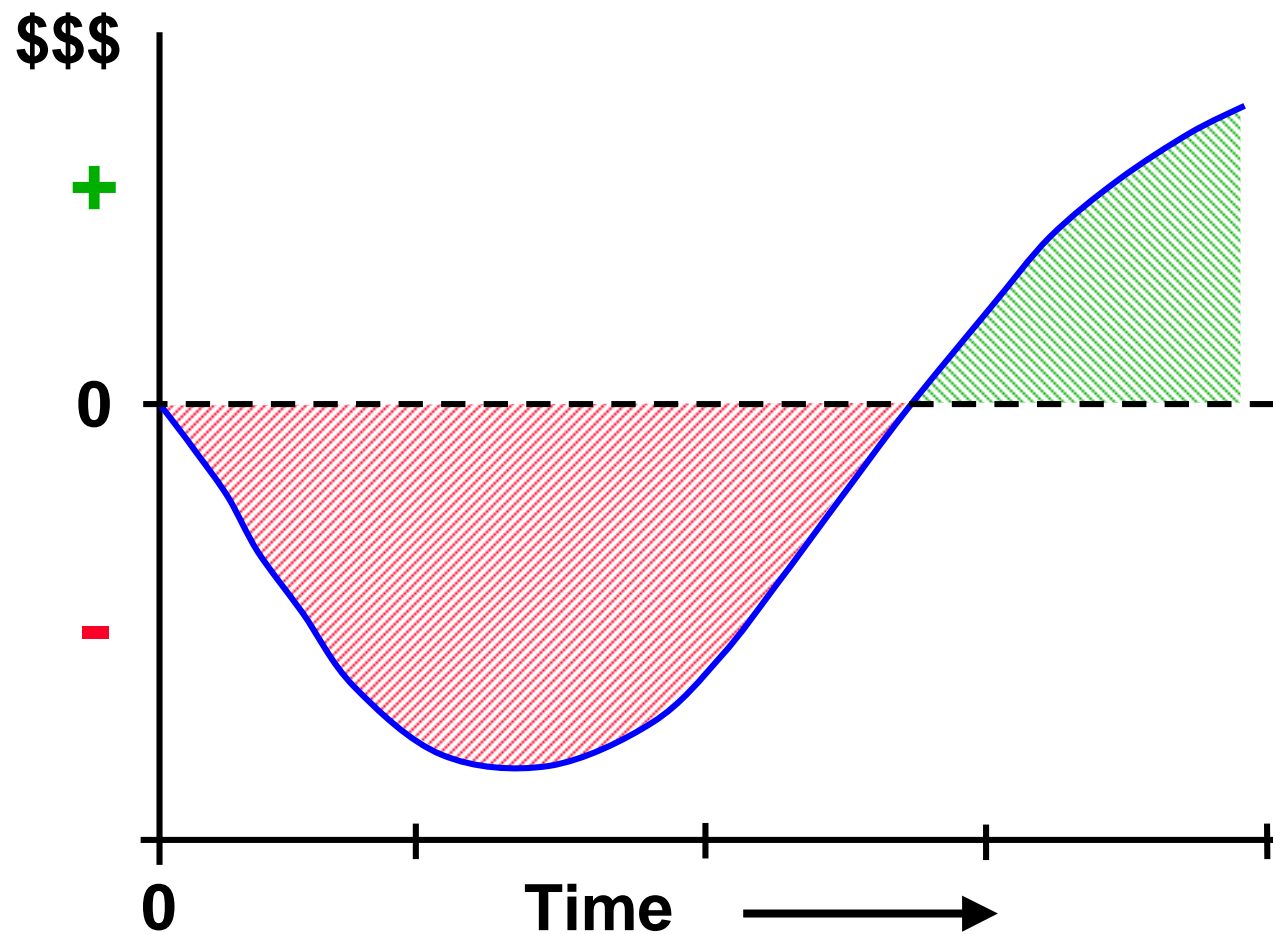
---

**Dr. Mark F. Smith**  
**Cold Spray Workshop**  
**Albuquerque, NM**  
**July 14-15, 1999**





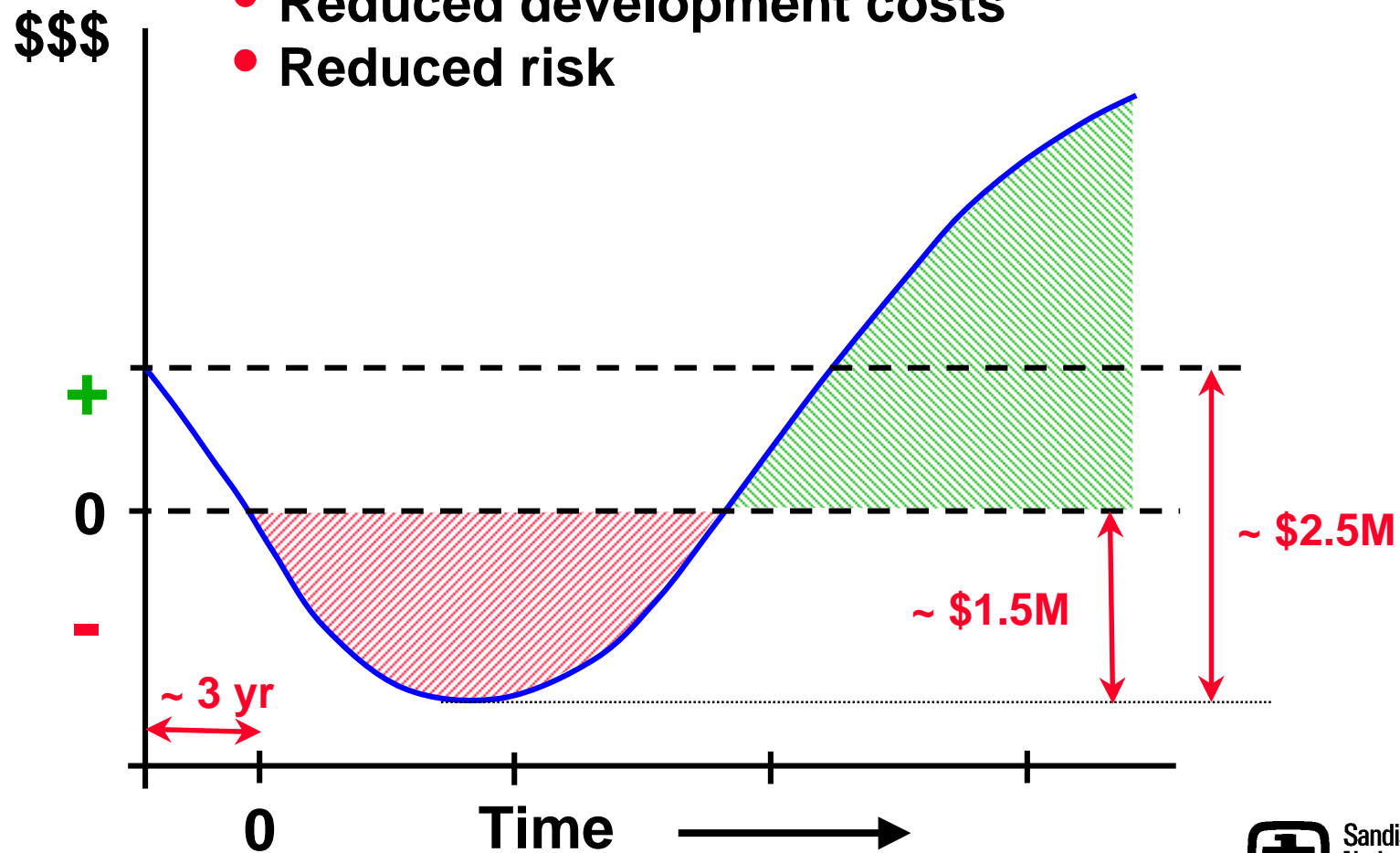
# Typical Technology Development





# Benefits of Partnering

- Shorter time to market & to profit
- Reduced development costs
- Reduced risk



# Additional Benefits

- Access broad SNL expertise & resources (now & future)
- Synergy of combined expertise / capabilities
- Inside track to new technology & IP



Combustion R&D

Non-Destructive  
Inspection of  
Aging Aircraft



Lower Emissions



Better Airbags



## Still More Benefits

---

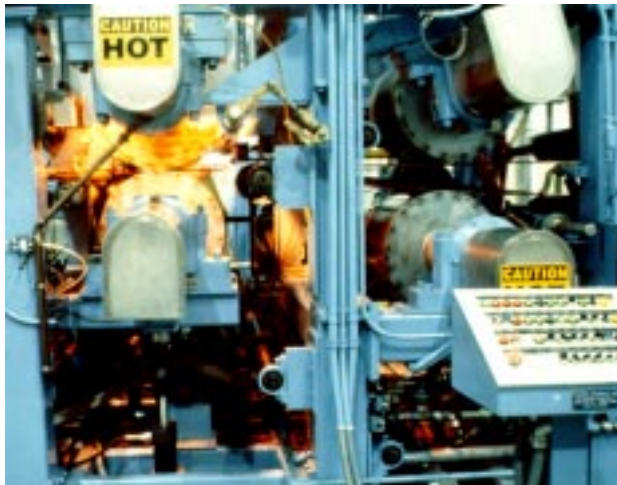
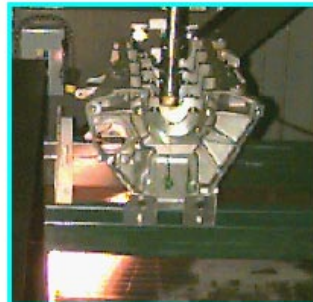
- Free up R&D capital ( $\$1.5\text{M} \div 10 \text{ co.} = \$150\text{k}$ )
- Highly leveraged investment ( ~ 10x)
- Less demand on your internal R&D resources





## Example Bottom Line Impact

- **GM** -- 200% Throughput Increase
  - ⇒ 50% lower capital equipment costs
  - ⇒ ~ \$15M saved per transfer line



- **IPST** -- 67% Energy Reduction
  - ⇒ potential \$800M / yr savings



# Independently Documented ROI

**Tech Transfer to TST, Inc.** Includes gov't sunk costs  
Direct costs only

|                 |                                  |            |
|-----------------|----------------------------------|------------|
| discounted @ 7% | total costs #1 (knowledge+grant) | 4,142,908  |
|                 | total costs #2 (grant)           | 65,035     |
|                 | total benefits                   | 14,919,142 |
|                 | benefits/costs #1                | 4          |
|                 | benefits/costs #2                | 229        |

!!!

Falcone & Bjornstadt, University of New Mexico



# Bottom Line

---

- Save time / money
- Reduce risk / internal resource demand
- Access new technology / IP

